

AMENDMENT TO THE CLAIMS

1. (currently amended) An air bearing slider comprising:

a slider body, a leading edge, a trailing edge and at least one raised bearing surface proximate to the trailing edge and at least one stepped bearing surface spaced from the trailing edge and recessed below the at least one raised bearing surface; and a first recessed cavity surface recessed below the at least one raised bearing surface and the at least one stepped bearing surface and a leading edge cavity step from the first recessed cavity surface to the at least one raised bearing surface and a cavity step from a second cavity surface to the first recessed cavity surface to form an adaptive bearing surface.

2. (currently amended) The air bearing slider of claim 1 wherein the first cavity surface is recessed a depth greater than approximately 1.0 μm below the at least one raised bearing surface.

3. (currently amended) The air bearing slider of claim 1 wherein the first cavity surface has a recessed depth greater than or equal to 2.0 μm and the stepped bearing surface is recessed less than or equal to 0.5 μm from the at least one raised bearing surface.

4. (currently amended) The air bearing slider of claim 1 wherein the first cavity surface is recessed a depth greater than approximately 2.0 μm below the at least one raised bearing surface and the at least one stepped bearing surface is recessed approximately 0.1 - 0.3 μm below the at least one raised bearing surface.

5. (currently amended) The air bearing slider of claim 1 wherein the at least one raised bearing surface includes a raised bearing rail having a convergent channel formed therealong between opposed rail portions and the convergent channel includes the first recessed cavity surface proximate to a trailing edge of the raised bearing rail to form the leading edge cavity step from the first recessed cavity surface to the at least one raised bearing surface.

6. (currently amended) The air bearing slider of claim 5 wherein the convergent channel includes multiple recessed cavity surface depths along the raised bearing rail including a first channel or milled depth below a stepped depth of the at least one stepped bearing surface to form the first recessed cavity surface and a second channel or milled depth below the first channel or milled depth to form the second recessed cavity surface.

7. (original) The air bearing slider of claim 6 wherein the first channel or milled depth is approximately 4.0 μm or greater and the second channel or milled depth is less than 4.0 μm and the second channel or milled depth forms the leading edge cavity step to the at least one raised bearing surface.

8. (original) The air bearing slider of claim 1 including opposed rails having a trailing edge spaced from the trailing edge of the slider and having a stepped channel having a stepped bearing surface formed therealong to define leading edge bearing steps from the stepped bearing surfaces to the raised bearing surfaces of the opposed rails.

9. (original) The air bearing slider of claim 5 including a cross channel formed between a leading edge bearing pad and a cavity dam and extending between opposed sides of the slider.

10. (original) The air bearing slider of claim 1 and further comprising opposed stepped cavity dam rails extending along a length of the slider between the leading and trailing edges of the slider.

11. (currently amended) The air bearing slider of claim 1 wherein the at least one raised bearing surface includes opposed raised side portions and a raised cross portion to form a convergent channel cavity including the first recessed cavity surface and the leading edge cavity step extends

from a the first recessed cavity surface of the convergent channel cavity to the raised cross portion.

12. (currently amended) An air bearing slider comprising:

a slider body, a leading edge, a trailing edge and at least one raised bearing surface proximate to the trailing edge having a cross portion and opposed side portions each elevated above a stepped bearing surface and including a cavity channel ~~relative to the cross portion and between~~ the opposed side portions of the ~~at least one raised bearing surface~~ having a recessed cavity surface recessed at least 1.0 μm from the at least one raised bearing surface and the stepped bearing surface and a leading edge cavity step from the recessed cavity surface to the at least one raised bearing surface proximate to the trailing edge of the slider.

13. (currently amended) The air bearing slider of claim 12 wherein the ~~and including~~ at least one stepped bearing surface forming~~forms~~ a bearing step having a step height of approximately less than 0.5 μm .

14. (original) The air bearing slider of claim 12 wherein the cavity channel is formed along a center rail having an elongate length to form the leading edge cavity step to the at least one raised bearing surface proximate to a trailing edge of the center rail.

15. (original) The air bearing slider of claim 14 wherein the center rail includes opposed rail portions extending from a transverse cavity dam and forming the at least one raised bearing surface proximate to the trailing edge of the slider.

16. (original) The air bearing slider of claim 14 wherein the center rail includes a tapered rail profile proximate to the trailing edge of the slider.

17. (currently amended) The air bearing slider of claim 14 and including opposed rails having a trailing edge spaced from the trailing edge of the slider and the opposed rails having a raised bearing rail surface and a stepped bearing rail surface ~~to form and including~~ a leading edge bearing step ~~from the stepped rail surfaces~~ to the raised bearing rail surfaces of the opposed rails.

18. (currently amended) The air bearing slider of claim 17 wherein the opposed rails include a channel having a recessed channel surface recessed below the stepped bearing rail surface.

19. (original) The air bearing slider of claim 18 wherein the opposed rails include a stepped inlet to the channel.

20. (currently amended) The air bearing slider of claim 14 and further including stepped cavity dam rails proximate to opposed sides of the slider having a stepped rail surface recessed below the at least one raised bearing surface .